GEMBA CONCEPTS

HIDDEN COSTS IN CABLE & WIRE MANUFACTURING: WHERE PLANTS LOSE MONEY

A cable plant can be busy all day and still lose money.

Machines are running, operators are working, and orders are moving but small losses can add up quickly. Extra copper or aluminium, unplanned scrap, downtime, slow machine speeds, long changeovers, excess inventory and production delays can quietly reduce margins.

The real opportunity is often not adding more machines or people. It is finding where time, material and production capacity are being lost.

Where Do the Hidden Costs Come From?

Manufacturing losses rarely come from one big problem. They usually build up through small problems that repeat every day.

- Material used above the planned quantity
- Scrap and rework
- Machine breakdowns and stoppages
- Machines running below achievable speed
- Long changeovers
- Excess or slow-moving inventory

- Material shortages
- Production waiting time
- Poor team coordination
- Delayed shop-floor information

A plant can meet its production target and still lose money. That is why teams need to look at both output and the cost of producing it.

7 Hidden Production Losses Every Cable Plant Should Check

Loss Area	What It Looks Like	What to Measure
Material variance	More material used than planned	Planned vs. actual consumption
Scrap & rework	Rejected or repeated work	Scrap and rework rate
Downtime	Machine is not producing	Downtime by reason
Speed loss	Machine runs below achievable speed	Actual vs. achievable speed
Changeover	Machine waits between products	Changeover time and start-up loss
Inventory	Too much or missing material	Stock levels and turnover
Planning	Plan does not match production	Planned vs. actual output

This gives plant teams a simple starting point for finding hidden losses.

Material Waste: A Small Difference Can Become a Big Cost

For cable and wire manufacturers, copper, aluminium, insulation and other materials form a major part of production cost.

During the electric wire manufacturing process and wider cable manufacturing process, material can be lost during setup, cutting, adjustments, defects and rejected production.

A simple check can reveal the difference:

Planned material use vs. actual material use.

If the numbers do not match, investigate machine settings, product specifications, process conditions, setup practices and material handling.

The goal is not simply to use less material. It is to understand why actual usage differs from the plan.

Scrap and Rework: The Loss May Start Earlier

Scrap is only one part of the larger production loss.

A rejected product may already include material, labour, machine time, electricity and testing costs. Rework adds more processing before the product can be accepted.

Common causes include:

- Incorrect machine settings
- Raw material problems
- Machine condition issues
- Quality failures
- Handling damage
- Process variation

The important question is not only “How much scrap did we produce?”

It is “Where did the problem begin?”

A defect found during final testing may have started much earlier.

Related reading: How to Reduce Scrap in Wire & Cable Manufacturing

Downtime: When the Machine Should Be Running but Is Not

A machine may be available but still fails to produce what the plan expects.

Breakdowns are one reason. Production can also stop because of material shortages, tool changes, maintenance waiting, operator availability, quality checks or repeated small stoppages.

Do not record only total downtime. Record why the machine stopped.

This helps answer: When the machine was supposed to be producing, what was stopping it?

Speed Loss: The Machine Is Running, but Not Fast Enough

Speed loss is easy to miss because the machine is still producing.

For example, if a machine can realistically produce 100 metres per minute but repeatedly runs at 80 metres per minute, there is no breakdown—but potential output is still being lost.

Possible causes include:

- Machine condition
- Process instability
- Product characteristics
- Operator settings
- Quality concerns
- Upstream or downstream restrictions

Track actual production speed against achievable speed for each relevant machine and product.

Changeovers Can Quietly Reduce Production Time

Cable plants often produce different sizes, specifications and customer orders. Changing from one product to another may require new tools, dies, materials, machine settings and testing.

Every unnecessary minute during a changeover reduces available production time.

Measure changeover time, setup time, start-up loss, first acceptable output and waiting time.

Then separate work that must happen while the machine is stopped from work that can be prepared beforehand.

The aim is simple: remove unnecessary waiting without rushing the work.

Inventory Can Tie Up Cash Without Improving Production

A warehouse full of material may look safe, but excess stock ties up cash. Too little stock can stop production.

Good cable inventory management means knowing what is available, what is committed, what is moving slowly, what is needed for upcoming orders and which shortages could affect production.

The goal is not a full warehouse. The goal is having the right material when production needs it.

When the Production Plan Does Not Match the Shop Floor

A production plan can look perfect in the morning and change by the afternoon.

A machine may break down. Material may arrive late. An urgent order may come in. A batch may be held because of a quality issue.

When planning and the shop floor use different information, teams make decisions with outdated information.

The result can be:

Machine delay → Production delay → Order delay → Dispatch pressure

Managers need a clear view of what has been produced, what is running, what is waiting and what may be delayed.

Find the Real Bottleneck in the Cable Manufacturing Process

The biggest problem is not always where the delay first appears.

The complete cable production process may look like:

Drawing → Stranding → Insulation → Cabling → Sheathing → Testing → Packing → Dispatch

A restriction at one stage can affect everything that follows.

If drawing cannot supply material fast enough, the next process may wait. If testing becomes the constraint, finished cable may build up before testing.

That is why the complete cable manufacturing process should be reviewed as one connected flow.

Ask:

- Where is work waiting?
- Why is it waiting?
- How long is it waiting?
- What is causing the restriction?

See the Proof Behind the Approach

Gemba Concepts' cable manufacturing work has focused on practical production issues such as bottlenecks, speed loss, manpower balancing, time-and-motion, SMED and OEE.

One cable manufacturing engagement reported a 53.9% improvement in throughput after addressing production constraints and process performance.

See the Cable Manufacturing Case Study

KPIs That Help Find Hidden Losses

The right numbers help plant teams see where capacity is being lost.

- Production output
- Material yield
- Scrap rate
- Rework rate
- Machine downtime
- Actual vs. achievable production speed
- Changeover time
- Machine availability
- Planned vs. actual production
- Material variance / planned vs. actual consumption
- Inventory turnover
- Order completion

Viewed together, these numbers tell a clearer story.

Output shows what was made. Downtime shows lost machine time. Speed loss shows lost capacity while machines were running. Material variance shows where actual consumption differs from the plan.

A manufacturing consultant can help connect these numbers to the real shop-floor problems.

How Gemba Concepts Can Help Cable and Wire Manufacturers

Improvement should start with what is actually happening on the shop floor.

Gemba Concepts uses practical methods such as bottleneck analysis, time-and-motion studies, SMED and OEE to understand where time, material, manpower and machine capacity are being lost.

The approach is simple:

See → Understand → Find the Cause → Improve → Measure

The goal is not to create a report that sits on a desk. It is to identify practical changes that teams can apply and measure.

Where Manufacturing Software Can Help

Technology can make production information easier to see.

Cable manufacturing software, production management software and production tracking software can help teams monitor production status, output, downtime, material usage, quality, orders and machine performance.

Shop floor management software and shop floor control software can bring production information closer to the people managing daily operations.

But software is not the solution by itself.

A dashboard can show where a problem is happening. Process knowledge is still needed to understand why it is happening.

A Quick Hidden-Loss Check

- Where are we losing material?
- Why are machines stopping?
- Which machines run below achievable speed?
- How long do changeovers really take?
- Which inventory is moving slowly?
- Where is production waiting?
- How close is actual production to the plan?
- Can managers see today's production status quickly?

If several answers are unclear, there may be hidden losses worth investigating.

Frequently Asked Questions

What are the biggest hidden costs in cable manufacturing?

Material variance, scrap, rework, downtime, speed loss, changeovers, excess inventory and production delays.

How can cable manufacturers improve production efficiency?

Measure time, material and capacity losses, identify the main causes, fix them and track the results.

How can a cable plant identify hidden capacity losses?

Compare actual output with achievable speed and review downtime, bottlenecks, changeovers and waiting time.

What does a Cable Manufacturing Consultant do?

A Cable Manufacturing Consultant reviews production processes and helps identify losses in productivity, quality, material use and shop-floor performance.

Why is cable inventory management important?

It helps maintain the right material levels while reducing shortages, excess stock and production delays.

How can production tracking software help?

Production tracking software provides visibility into production status, output, downtime, orders and machine performance.

How can a Cable Plant Consultant improve productivity?

A Cable Plant Consultant can review the complete production flow, identify bottlenecks and help implement practical shop-floor improvements.

Final Takeaway

Cable manufacturers do not always need more machines or more people.

Sometimes, they need to stop losing the capacity they already have.

Find where material, machine time and production capacity are being lost. Fix the cause, standardize the improvement and measure the result.

Small improvements can make a meaningful difference when the same process runs every day.

Find the Capacity Your Cable Plant Is Already Losing

See where material, machine time and production capacity may be getting lost across your operation.

Assess Your Cable Manufacturing Process

Secondary CTA: See a Cable Manufacturing Case Study

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Thank
you!